Transit Element

Introduction

Public transportation is a vital element of the total transportation services provided within a metropolitan area. Not only does public transportation provide options to senior citizens, those without vehicles, and those who are physically or economically disadvantaged, but it also is an efficient, low cost, high capacity means of moving people through a densely traveled corridor. The ability to provide a transportation alternative for those who live in high density areas is as important as for those living in low density or rural areas. The planning area for this report is served by several transportation systems.

Existing Services

The Piedmont area has three municipally-funded and operated transit systems. Greensboro, High Point, and Winston-Salem all have publicly-funded transit systems in operation. In addition to the publicly-funded transit authorities, a regional transit authority also is in place for the planning area. The Piedmont Authority for Regional Transportation (PART) began operations in 1997 with the intent of improving transportation alternatives regionally. **Map 7.1** shows existing service.

Greensboro Transit Authority

The Greensboro Transit Authority (GTA) began operations in 1991 after it assumed control of the local transit services from Duke Power's Transit division. At that time, GTA revised routes, updated service, and replaced the existing fleet of vehicles.

Currently, GTA operates 14 fixed routes, radiating from a central transfer station. GTA's central hub is the J. Douglas Galyon Depot, a multimodal transportation center, which was formerly Greensboro's Norfolk Southern Railway station. The Depot currently houses GTA operations as well as Greyhound/Trailways Charter Bus services. Amtrak has future plans to relocate its passenger rail operations to the Depot upon completion of track and station improvements in 2006, which are currently under way.

GTA operations include a fleet of 32 large buses and 28 small buses. The large buses serve 14 daytime bus routes (weekday and Saturday service), 7 Sunday routes, and 7 evening routes. The small buses serve 4 fixed connector routes, shuttle services around the Starmount and Irving Park areas, and a shared ride service

Greensboro Urban Area Long-Range Transportation Plan

Existing Transit Service
Map 7.1

Stokesdale

Summerfield

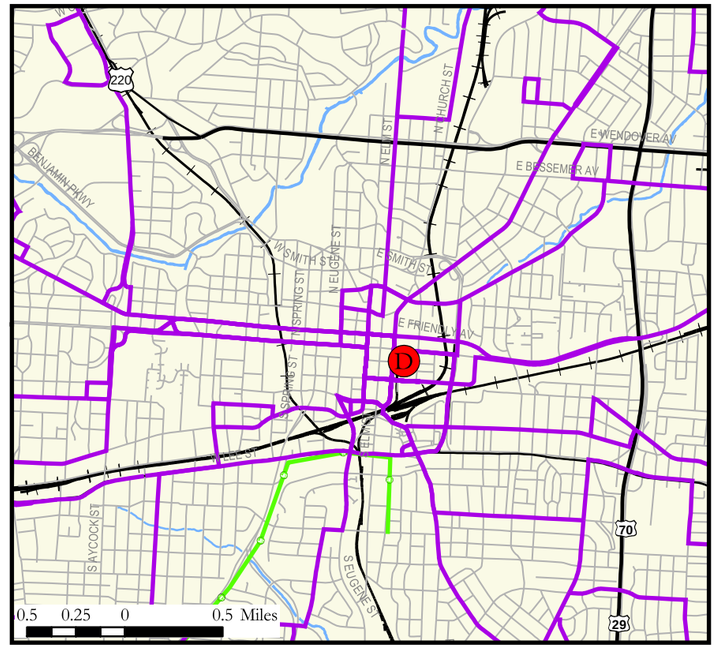
Oak Ridge

Piedmont Triad
International Airport

Greensboro

Pleasant Garden

Inset: Greensboro CBD



Legend

- Railroads
- Interstates
- US Highways
- State Highways
- Metropolitan Area Boundary
- County Line
- Greensboro City Limits
- Depot
- GTA Fixed Route

PART Express

- Greensboro Express
- Winston-Salem Express
- High Point Express

0 0.5 1 2 3 4 Miles

N
W E
S

August 26, 2004

Mapping prepared by Kimley-Horn and Associates, Inc.
for the Greensboro Urban Area Long-Range Transportation Plan
Data Sources: Guilford County, the City of Greensboro, FEMA, the U.S. Census Bureau, KHA, and NCDOT

known as Specialized Community Area Transportation (SCAT). SCAT is a shared-ride transportation service for users with disabilities or other conditions which prevent them from accessing the standard fixed-route transit system.

Piedmont Authority for Regional Transportation

Established in 1997, the Piedmont Authority for Regional Transportation is a regional partnership among four MPOs and several local governments within Alamance, Davidson, Forsyth, Guilford, Randolph, and Rockingham counties. PART's work program includes two key emphasis areas: to plan for and operate a regional public transportation system; and to serve as a forum for cooperative regional transportation planning. PART's mission is to enhance the quality of all forms of transportation through efficient use and protection of natural, economic, and human resources.

PART's fleet includes 12 mid-size buses and 72 vans. The PART Express bus service operates between the downtown areas of Greensboro, High Point, and Winston-Salem. PART Express provides a 30 minute peak hour service and a 60 minute off-peak hour service between the downtowns. The Express service is centralized at the new PART Regional Hub located near the intersection of Regional Road and Albert Pick Road. Fares are $2 each way.

The PART Shuttle service provides a direct connection between employment centers in and around the airport as well as a direct connection to the airport. PART operates the Piedmont Triad International Airport (PTIA) shuttle, while GTA subsidizes and operates the Piedmont Center shuttle, the Pleasant Ridge shuttle, and the Burnt Poplar shuttle. All of the shuttle services are free.

PART also operates a ridesharing and vanpooling program as well as the PART Connections service, which provides multi-county, non-emergency transportation to the hospitals at UNC-Chapel Hill, and Duke University. Fares are $20 each way for the general public or free for clients of Guilford County Transportation Services.

Guilford County

Along with providing support services for SCAT, Guilford County also provides non-ADA (Americans with Disability Act) subscription and dial-a-ride services for residents of Guilford County, not living inside the City of Greensboro. Service is available weekdays and Saturdays, and fares are $1.60 each way.

Amtrak

America's railroads provide an important alternative to auto and air transport for both passengers and freight. As the Nation's largest provider of passenger rail service, Amtrak serves 500 stations in 46 states, operating 425 locomotives and 2,141 railroad cars. Amtrak's Pomona Station in Greensboro is one of the busiest in North Carolina. Amtrak will relocate its passenger rail operations to the J. Douglas Galyon Depot upon completion of track and station improvements in 2006, which are currently under way. The MPO works with the NCDOT Rail Division to plan for future services that will meet growing passenger rail transportation needs.

Three passenger trains serve Greensboro twice daily: the Carolinian, the Crescent, and the Piedmont. The Carolinian runs from Charlotte to New York, the Crescent runs from Atlanta to Washington, DC, and the Piedmont runs from Charlotte to Raleigh. Connecting service at Pomona Station is available via GTA, taxi, and rental car. Fares vary substantially by route, destination, and time of year, but are generally cost-competitive when compared with auto or air travel.

Improving travel time

To reduce travel time for both freight and passenger trains along the existing passenger rail corridor, the NCDOT Rail Division has partnered with the North Carolina Railroad (NCRR) and Norfolk Southern (N-S) to improve the busy rail corridor connecting Greensboro with Raleigh and Charlotte. Construction began in summer 2002 to modify portions of track and install a new train control system. Work is scheduled to be completed in 2004. These track improvements are expected to reduce the travel time between Raleigh and Greensboro by approximately 20 minutes.

Safety

In an effort to improve the safety of rail crossings in the rail corridor from Raleigh, through Greensboro to Charlotte, the NCDOT Rail Division and N-S have initiated the Sealed Corridor Project. This project involves various types of improvements to the 209 public rail crossings in the corridor, including: installation of median separators, longer gate arms, four-quadrant gates, modernized warning devices, and "health monitoring" devices, as well as crossing closures and roadway re-alignments.

Implementing high-speed rail

The proposed Southeast High-Speed Rail (SEHSR) project would provide passenger rail service between Washington, D.C. and Charlotte, NC at a maximum speed of 110 mph. Service eventually may extend to South Carolina, Georgia and Florida. In October 2002, the Federal Railroad Administration and Federal Highway

Administration confirmed and approved the preferred SEHSR corridor. North Carolina is currently conducting the Tier II Environmental Study to identify the next steps necessary to develop high-speed rail along its portion of the corridor. The track and crossing improvements described previously will greatly facilitate implementation of the SEHSR project. The SEHSR system is anticipated to be operational by 2010.

Planning for the Future

The recommended investments in the public transportation element are based on 1) the Greensboro Transit Authority's recently adopted Mobility Greensboro Long Range Public Transportation Plan; and 2) the regional public transportation services and plans of the Piedmont Authority for Regional Transportation (PART). Total public transportation investments are expected to exceed $677 million through 2030. Operating and maintenance costs (O&M) are expected to represent a majority of the costs as illustrated in **Table 7.1**. **Map 7.2** illustrates GTA and PART planned services.

Table 7.1 — Transit Costs and Revenues

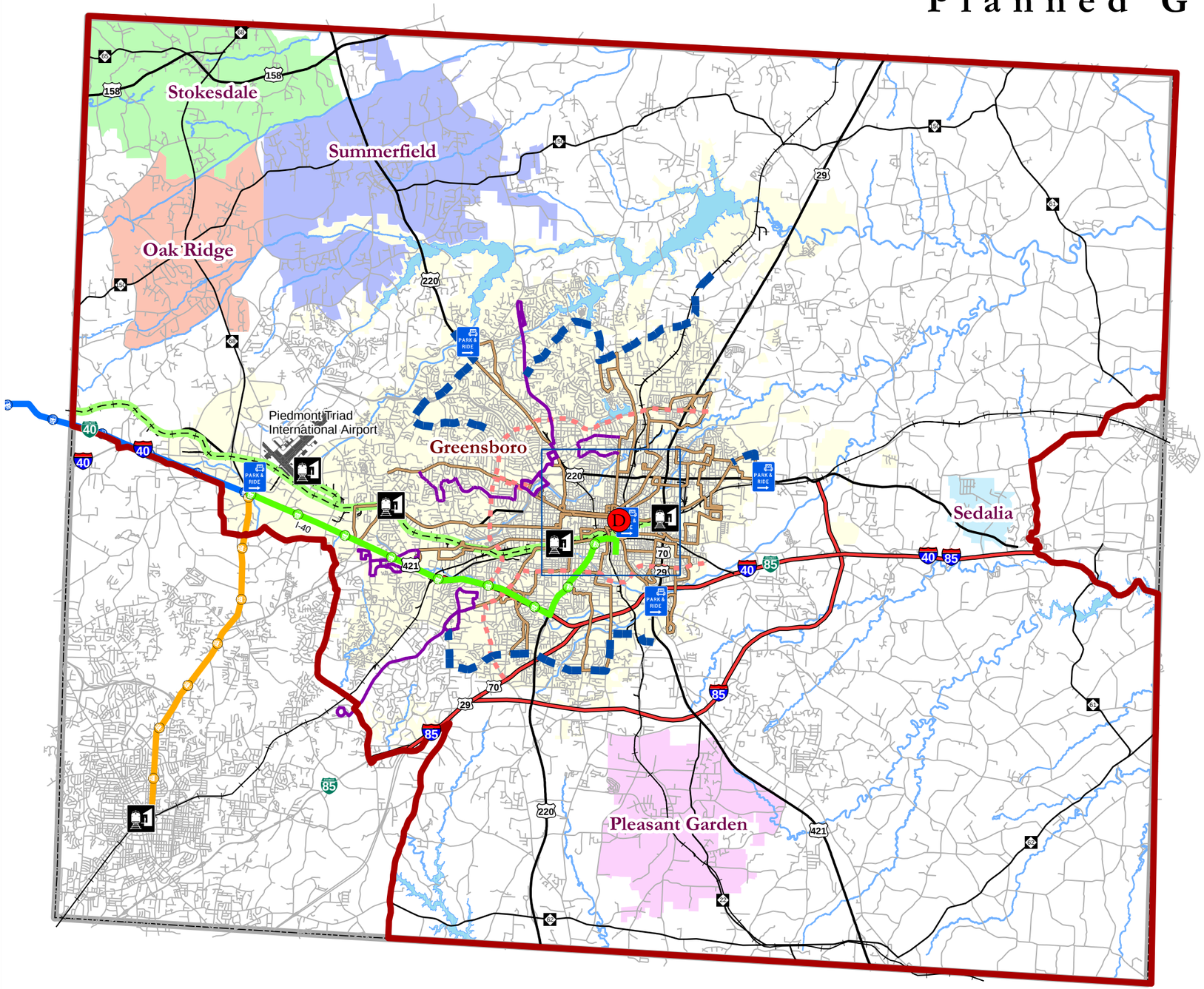
Transit Costs and Revenues (in thousands of dollars)					
Period	**Costs**			**Revenues**	**Difference**
	O&M	**Capital**	**Total**	**Total**	
2004	9,873	6,649	16,522	16,530	8
2005-2014	124,230	88,266	212,496	212,520	24
2015-2020	143,214	36,209	179,423	179,560	137
2021-2030	255,196	13,665	268,861	280,970	12,109
Totals	**$532,513**	**$144,789**	**$677,302**	**$689,580**	**$12,278**

Mobility Greensboro Long Range Public Transportation Plan

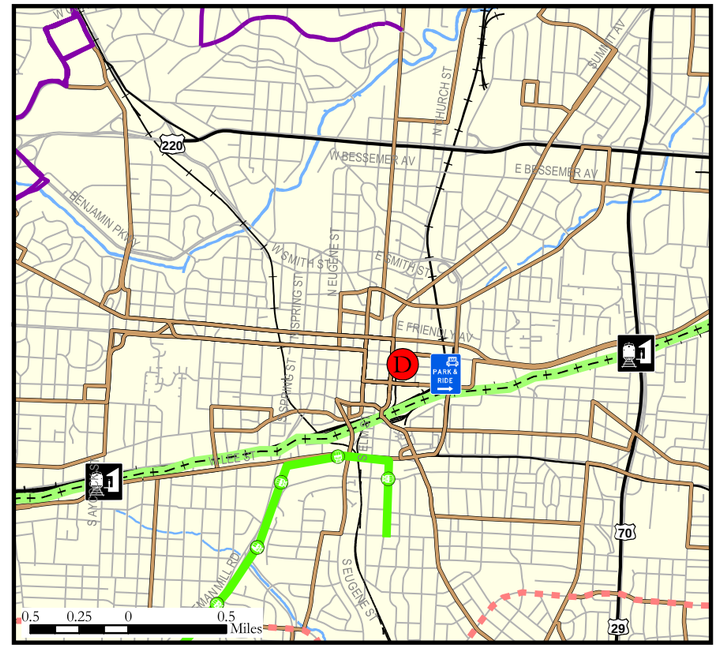
In August 2002, GTA initiated a long range planning process to establish a vision for the future of public transportation in Greensboro. The Mobility Greensboro Long Range Public Transportation Plan expresses a comprehensive vision for public transportation and enhances the understanding of the future role of public transportation in the City of Greensboro. The final Mobility Greensboro Report can be accessed on the internet at:

http://www.ci.greensboro.nc.us/gdot/public_trans/mobility/final_plan.htm

Planned GTA and PART Services
Map 7.2



Inset: Greensboro CBD



Legend

- Interstates
- US Highways
- State Highways
- Metropolitan Area Boundary
- Depot
- Park-and-Ride
- Train Station
- Railroad
- Proposed Commuter Rail

PART Express

- Greensboro Express
- Winston-Salem Express
- High Point Express
- Existing GTA Route
- Future Connectors
- Existing Connectors
- Existing Connectors

0 0.5 1 2 3 4 5 Miles

N W E S

August 26, 2004

Mapping prepared by Kimley-Horn and Associates, Inc. for the Greensboro Urban Area Long-Range Transportation Plan
Data Sources: Guilford County, the City of Greensboro, FEMA, the U.S. Census Bureau, KHA, and NCDOT

A Vision for Greensboro

The consistent vision that has emerged from the Mobility Greensboro public involvement process includes:

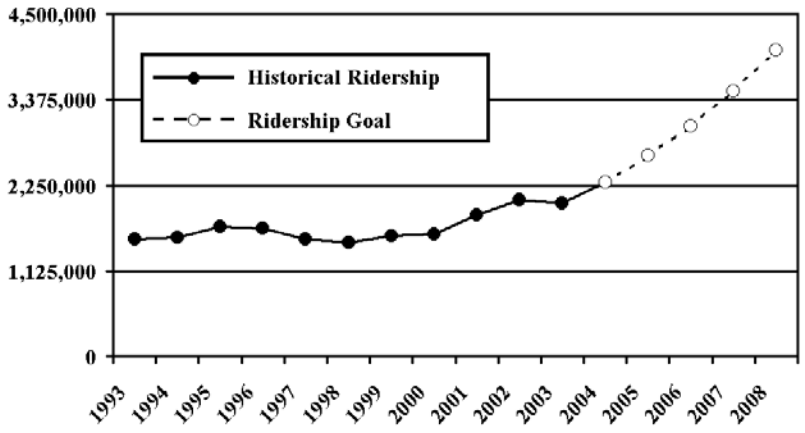
- Clean, alternative-fueled buses stopping near homes and destinations every 15 minutes
- Those same buses traveling directly to destinations in downtown or cross-town
- Strong partnerships between GTA and the universities, colleges, and employers throughout the Greensboro area
- The availability of park-and-ride lots on major corridors that provide convenient access to bus rapid transit that travels quickly and directly to The Depot
- A revitalized downtown Greensboro that is pedestrian friendly and provides mobility through a downtown circulator bus
- Public transportation services that are integrated regionally to support convenient connections throughout the Triad region
- The effective use of technology to improve customer service and enhance the availability of customer information
- 11,000 daily bus trips on GTA, or double annual ridership from 2 million to over 4 million by 2008
- 25,000 daily bus trips on GTA by 2025

Figure 7.3 illustrates GTA's ridership trend since 1993, as well as the 2008 goal. This aggressive goal will require a significant commitment by the City and GTA, taking the form of leadership by decision makers, capital resources to support new services, and financial resources to fund new services.

Thousands of citizens and visitors participated in the development of Mobility Greensboro. Public involvement efforts included:

- Leader interviews
- Non-user telephone survey
- On-board user survey on GTA buses
- Two consensus-building workshops
- Outreach program to an estimated 350 citizens and 40 major employers

Figure 7.3 — Transit Ridership
Mobility Greensboro Transportation Master Plan



Implementation

The next 5 years will be critical to the successful implementation of Mobility Greensboro. Many components of the plan, however, go beyond the 5-year goal and are longer term in nature. These would need to be gradually implemented over the next 10 to 15 years. The resulting transit improvement priorities to achieve the 5-year goal are summarized below:

Service Improvements

- Increase the frequency of service on existing bus routes.
- Implement cross-town routes to provide service between destinations, without stopping downtown at the Depot.
- Establish park-and-ride lots along major corridors
- Implement a downtown circulator service

Marketing/Education

- Hire a marketing director to ensure a strong focus on marketing and education.
- Expand the travel training program to help existing and future riders understand how to use public transportation.
- Expand partnerships with universities, colleges, and businesses to enhance ridership base.
- Increase the number of outlets where GTA information can be accessed, and where bus passes may be purchased.

Infrastructure/Technology

- Provide real-time customer information at the Depot and other selected locations (kiosks).
- Consider alternative fueled vehicles as part of future vehicle purchases.
- Focus on essential infrastructure, such as high quality buses, shelters, and customer information.
- Use the Internet extensively to distribute GTA information, display real-time rider information, and facilitate trip planning using the GTA bus route network.
- Coordinate with City staff regarding the sidewalk improvement program, emphasizing access to bus stops, and sidewalk connections from bus stops to major destinations.

Transit and Land Use

- Encourage transit supportive development through appropriate policies and procedures in the Unified Development Ordinance and the site plan review process.
- Consider the impacts of parking policies on GTA ridership and promoting transit use through parking disincentives.

Transit Funding

- Be more proactive in pursuing state and federal grants.
- Expand partnerships with universities, colleges, and businesses to increase revenue stream.
- Identify new and innovative revenue sources.

Potential Revenue Sources

Potential revenue sources were discussed as part of the Mobility Greensboro visioning process. Potential revenue sources are identified and discussed below in the context of supporting the implementation of Mobility Greensboro in the coming years.

Primary Revenue Sources

- **Increase the full cash fare for local bus service** — Increasing the full cash fare could play an important role in addressing the revenue deficit. An 25% increase in all fare categories is projected to result in an approximate increase in fare revenues of $0.3 million annually.
- **Increase the property tax millage rate for GTA** — GTA is currently authorized to levy an ad valorem property tax rate of $0.02 per $100 of assessed value from the City of Greensboro, which amounts to about 40% of the operating costs for transit operations. If GTA raised the rate to the maximum $0.035 per $100 of assessed value, the annual revenue from this source would increase to nearly $6.0 million, or an additional $2.6 million.
- **Increase the vehicle motorpool tax** — The current tax rate of $5.00 generates approximately $0.9 million. Increasing the tax to $6.00 is projected to result in an additional $0.1 million annually; likewise, increasing the tax to $10.00 would generate an additional $0.9 million annually.
- **Pursue a sales tax for public transportation —** Another revenue option would be for the City to adopt an increase in the local sales tax, that would specifically support public transportation. Guilford County currently levies a 2.5% sales tax, which results in an annual allocation to Greensboro of $34.3 million, or approximately $6.9 million for each 0.5%. By increasing the local sales tax rate to 3%, a significant source of revenue could be generated to support GTA.

Supporting Revenue Sources

- **Be more aggressive in pursuing state and federal grants** — The City should be more aggressive in pursuing traditional grants and should work more closely with its legislative delegation to pursue Congressional earmarks as appropriate. An increase in the local financial commitment

also could improve the ability to leverage additional state and federal dollars for public transportation.

- **Pursue college pass program with local colleges and universities** — College pass programs around the country are typically funded by colleges or student fees and involve transit service specifically oriented toward student destinations. Such a relationship also can play an important role in addressing parking shortages on or near campuses.
- **Expand Corporate Connections program** — Employer pass programs can provide a benefit to employees, a tax benefit to the employer, and/or help resolve a parking shortage, while at the same time increasing ridership for GTA. With improved marketing, GTA's existing Corporate Connections program could achieve these benefits.
- **Advertising revenue** —While an aggressive advertising program is not expected to generate more than $20,000 to $30,000 annually, it can play a supporting role in the complete package of revenue solutions.
- **Joint Development** — Joint development opportunities with the private sector are evident with the Depot, especially with the future lease space that will be available. The primary and supporting revenue sources identified for consideration as part of Mobility Greensboro are summarized in **Table 7.2**.

Table 7.2 — Potential Revenue Sources for Mobility Greensboro

Mobility Greensboro Transportation Master Plan

PROJECT REVENUE DEFICIT FOR MOBILITY GREENSBORO	**$1.3 million in 2005, to a high of $10.1 million in year 2009**
POTENTIAL PRIMARY REVENUE SOURCES	
REVENUE SOURCE	**PROJECTED ADDITIONAL ANNUAL REVENUES**
Across-the-board increase of 25% for all fare categories	$0.3 million
Increase in the Property Tax for public transportation (to maximum)	$2.6 million
Increase in the Motorpool Vehicle Tax ($5.00 to $6.00) Increase in the Motorpool Vehicle Tax ($5.00 to $10.00)	$0.1 million $0.9 million
Adoption of a Sales Tax (½ cent)	$6.9 million
POTENTIAL SUPPORTING REVENUE SOURCES	
REVENUE SOURCE	**PROJECTED ADDITIONAL ANNUAL REVENUES**
Be more aggressive in pursuing State and Federal grants	To be determined
Aggressively Pursue College Pass Program	To be determined
Aggressively expand Corporate Connections Program	To be determined
Advertising Revenue	To be determined
Joint development at the Depot and other transit centers	To be determined

Implementation Phase

The first phase of Mobility Greensboro provided the blueprint and framework for the future of public transportation in Greensboro. In the implementation phase, GTA will begin to carry out the many tasks that will lead to accomplishing the goals identified in the Mobility Greensboro report, including:

- Prepare a detailed implementation plan with the assignment of specific responsibilities and timeframes for the completion of these responsibilities
- Prepare a detailed staffing plan to support the implementation of Mobility Greensboro
- Work with City staff to integrate Mobility Greensboro into the Comprehensive Plan and the MPO's LRTP as appropriate
- Provide service planning support as appropriate for service expansion outlined in the Mobility Greensboro Plan
- Develop an Infrastructure Design Standards/Guidelines Handbook to facilitate the consistent application of infrastructure and technology throughout GTA
- Perform additional public outreach activities as appropriate to obtain input and maximize support for the implementation of Mobility Greensboro
- Prepare a more-detailed financial plan once additional guidance is provided by the City Council, as well as by GTA and other City staff
- Provide miscellaneous support services for the implementation of Mobility Greensboro as requested by GTA and City staff

PART Regional Commuter Transit Major Investment Study

Another major public transportation planning effort in the Greensboro area is being led by PART. PART is responsible for developing long-term improvements in public transportation in response to current travel trends. As part of that responsibility, PART has initiated a Major Investment Study (MIS) to explore options for implementing a regional fixed-guideway commuter transit service. The term "fixed-guideway" refers to systems that enable transit vehicles to achieve faster travel times by providing a separate travel way. Rail transit systems and exclusive bus facilities both, are considered fixed guideway systems.

The MIS evaluated the feasibility of design, construction, operation, and maintenance of a fixed-guideway transit system. The MIS examined the technologies, routes, and services that are most likely to meet future demand for improved mobility options. The study also evaluated the necessary changes to land use patterns adjacent to future transit stations in order to be supportive of the proposed new service.

Under the Federal Transit Administration's (FTA) current New Starts regulations, the preparation of an MIS is the first in a five-stage process: corridor planning, preliminary engineering (PE), final design, construction, and operation. The FTA has reviewed the preliminary study and has authorized PART to begin initial steps in the PE phase. Additionally, FTA has requested that PART provide supplemental information regarding the estimation of future ridership figures and evaluation of the feasibility of other technologies including monorail.

Negotiations are under way that will lead to a Memorandum of Agreement regarding track and right-of-way usage, system operation responsibilities, construction contracting and other details of the future service. This agreement will significantly reduce potential organizational barriers when construction and eventual operation of the system become imminent. Currently, PART anticipates that its regional commuter transit service will be operational by 2014.

The MIS focused on the travel needs of the entire Triad region (Guilford, Alamance, and Forsyth Counties) rather than on the internal travel needs within individual jurisdictions. The study began with a strategic planning examination to determine which corridors should be given priority for consideration of major investment. To aid in developing cost and ridership estimates for the alternatives, specific alignments were selected. Although the actual alignments will be determined through more detailed evaluation during the design phase, the preliminary alignments under consideration are:

- Burlington to Clemmons – I-40 and the Norfolk Southern (NS) and North Carolina Railroad (NCRR) corridors
- High Point to Greensboro – I-85 and NCRR corridors
- High Point to PTIA – NC 68 corridor
- High Point to Winston-Salem – US 311 corridor

Because of the length of the first corridor, and the lower development density at either end, two shorter segments of this corridor were also considered as options that could function as an initial phase of the service. The two shorter segments extend from North Carolina Agricultural & Technological State University (NCA&T) to Hanes Mall, and from Greensboro CBD to Winston-Salem CBD. In Federal terms, the Hanes Mall to NCA&T segment is considered the Minimum Operable Segment (MOS). PART plans to pursue implementation of the MOS through the remaining work of corridor planning and into the PE process.

Public Involvement

Public involvement in the PART MIS process has included convening a project Steering Committee, conducting interviews

with elected officials, and planning officials, holding a developer forum (for land use issues), conducting several open houses, and distribution of several newsletters. The purpose and need for these proposed transit improvements and the alternatives analyzed were developed with significant input from the public involvement activities.

Target Ridership

During the development of the PART MIS, five major user groups were identified as needing to be served by the transit improvements: work commuters, college and university students, retail patrons, special event attendees, and airline passengers. The station locations, level of service and other improvements detailed in the MIS were selected to provide these groups with convenience and efficient service.

Technology Options and Selection

The study evaluated both bus and rail alternatives. The first technology would predominately use freeways and the second would use railroad right-of-way. The two specific technologies analyzed by the MIS were the Diesel Multiple Unit (DMU) and the Bus Rapid Transit (BRT). The Bus Rapid Transit (BRT) technology was selected for its low cost and its ability to operate on existing roadways and access existing transit terminals. The BRT would operate primarily on separate fixed guideway facilities, and the vehicles would be similar to standard transit buses.

The DMU technology was selected as the locally preferred option because it offered several advantages applicable to the Triad environment: compatibility with existing rail lines, continuous grade separation unnecessary, performance characteristics appropriate for intercity service, and a self-contained power system. The analysis assumes that Federal Railroad Administration (FRA) compliant vehicles are used on all rail corridors to permit maximum flexibility in sharing existing freight tracks. This choice will be reconsidered and confirmed within the next phase of alternatives analysis work.

Operating Plan

The following service level assumptions (for initial planning purposes) are common to both alternatives on all corridors:

- Operates from 5 AM to 11 PM weekdays, 6 AM to 11 PM Saturdays, and 7 AM to 11 PM, Sundays and holidays
- Weekday headways (frequencies) are 15 minutes from 6 AM to 9 AM and 4 PM to 7 PM; 30 minutes at other times

- Saturday headways are 30 minutes; Sunday and holiday headways are 60 minutes

These hours and frequency of service are typical for new rapid transit systems. These service levels are greater than most bus routes in operation in the Triad today, but the higher service levels are warranted by the expense of the capital investment. **Table 7.3** depicts the average speeds and total travel times for each of the four corridors, for both the commuter rail and bus rapid transit alternatives.

Table 7.3 — Regional Corridors: Speed and Travel Time

Corridor	Rail DMU Alternative	BRT Alternative
Burlington to Clemmons	47.6 mph 82 minutes running time	25.3 mph 143 minutes running time
High Point to Greensboro	32.3 mph 28 minutes running time	27.4 mph 34 minutes running time
High Point to PTI Airport	29.9 mph 31 minutes running time	27.7 mph 26 minutes running time
High Point to Winston-Salem	30.7 mph 45 minutes running time	38.2 mph 28 minutes running time

Ridership Estimates

The ridership levels used in the MIS are consistent with the transit ridership levels forecast by the current Triad Regional Travel Demand Model. Using the assumption that additional transit service is available throughout the Triad, the model analysis estimates that 140,700 unlinked transit trips are made in the Triad daily. The availability of the regional commuter transit service is expected to result in ridership increases in the Triad's local transit systems, demonstrating a high degree of mutual support. **Table 7.4** shows the projected ridership by corridor for the Rail DMU and BRT Alternatives. While the Burlington to Clemmons DMU line has the highest expected ridership, the NCA&T to Hanes Mall DMU line demonstrates greater cost-effectiveness, which is part of the rationale for its selection as the locally preferred corridor. These figures are expressed in terms of "linked" trips, representing one-way trips, which avoids double-counting transfers.

Table 7.4 — Corridor Ridership

Corridor	Rail DMU Alternative	BRT Alternative
Burlington to Clemmons	11,191	9,305
NCA&T to Hanes Mall	9,145	6,928
Greensboro CBD to Winston-Salem CBD	4,320	3,376
High Point to Greensboro	2,052	2,810
High Point to PTI Airport	627	1,792
High Point to Winston-Salem	2,860	1,951
TOTAL LINKED TRIPS	16,730	15,858

Stations

Station area planning focused on quarter- and half-mile radii from each proposed location. The quarter-mile radius has the highest potential for land-use change, since most pedestrians are unwilling to walk to destinations further than this. The area within the half-mile radius serves as a transition to the quarter-mile core and to the abutting land uses beyond its outer edge.

While multiple stations are proposed along the alternative alignments, not every station will have substantial adjacent development. For successful station area development to occur, several key factors must be present, including:

- **A Supportive Real Estate Market** — The presence of a station does not ensure that development will occur; a sound real estate market dynamic must exist, then a station may have an accelerator effect on development
- **Transit-Oriented Design (TOD) & Responsive Land Use Plans** – Local governments must have transit-supportive land use plans and policies in place
- **Public/Private Partnerships** — Since TODs are a relatively new development form, some form of public/private shared implementation arrangements may be necessary to "make the deal go"
- **Mixture of Incentives** — A corollary to public/private partnerships is a mix of incentives in the form of shared parking arrangements, reduced parking ratios, density/intensity bonuses, location efficient mortgages, and expedited project approvals, with an emphasis on administrative decision-making

Study Findings

The MIS draws several conclusions regarding the various corridor, technology, and station options for the proposed regional commuter transit service. A Locally Preferred Alternative (LPA) has been selected, which specifies that:

- The corridor to be targeted for initial improvements is the NCA&T to Hanes Mall segment
- The type of technology to be used is the Colorado Rail Car Diesel Multiple Unit (DMU), and
- There will be 10 stations along the corridor, 5 of which will be located within the Greensboro Urban Area

Summary and Recommendations

Summary

The Mobility Greensboro plan seeks to double GTA ridership by 2008. The LRTP assumes that this goal will be achieved by 2014. Mobility Greensboro proposes to meet this goal through enhanced services (shorter waits, new routes), a focus on passenger amenities (bus shelters, real-time bus location information services), and close coordination with area colleges and universities. It recommends additional revenue sources needed to implement the plan. The plan proposes to increase the GTA fixed route fleet size from 36 in 2004 to 75 in 2014.

The LRTP finds that GTA's service expansion plans appear reasonable, and can reasonably be expected to be funded in the timeframe noted in the plan. Actual timing of GTA's service expansion plans will depend on the availability of additional revenue sources. Revenue availability will depend in part on the results of implementation discussions that will unfold over the short to mid-term. Assuming the Mobility Greensboro Improvements are made by 2014, additional service enhancements could be expected by 2020 and 2030. However, these have not been identified in the 2030 LRTP update pending further technical assessments about what form these enhancements might take.

The LRTP assumes current PART services remain in operation through 2020. By that time, a regional rail line between Hanes Mall (west of Winston-Salem) and NCA&T State University in Greensboro would be open, according to current PART plans. The LRTP assumes that the Hanes Mall to NCA&T regional rail line begins operation by 2017. At that time, the Greensboro and Winston-Salem express bus services are assumed to be phased out, though the High Point connection would remain in service.

The LRTP finds that PART's plans appear reasonable, and can reasonably be expected to be funded in the timeframe noted in the plan. Actual implementation and timing will depend on 1) revenue availability; and 2) approval of plans by regulatory and funding agencies including the Federal Transit Administration. Discussions of revenue needs and availability will unfold in the next few years, as will PART's project development efforts.

The BRT Alternative does best on the measures related to cost; and if cost is the primary consideration, then the BRT Alternative should be selected. The BRT Alternative also has the highest absolute ridership levels in the High Point to Greensboro and the High Point to PTI Airport Corridors.

The Rail DMU Alternative, in general, performs better on the access, convenience, and environmental factors. The Rail DMU Alternative also carries the largest number of absolute riders in the Burlington to Clemmons and the High Point to Winston-Salem Corridors. This higher ridership level is due in part to the proximity of the rail line to many major destinations. The rail line is also located closer to many concentrations target ridership groups, and further from environmentally sensitive locations.

On a corridor-level analysis, the Burlington to Clemmons Corridor has the highest ridership levels, regardless of the technology used. These high levels are at least partially influenced by the long distance (60 to 65 miles) of the corridor. On a performance basis, the shorter segment from NCA&T to Hanes Mall serves the majority of the target ridership groups and major destinations of the longer corridor, while avoiding many of the environmentally sensitive areas. Ridership on this segment remains high, with 75 to 80 percent of the full corridor ridership occurring in this segment. For the Rail DMU Alternative, this segment has the best cost indicators of any of the corridors, except for the Greensboro CBD to Winston-Salem CBD segment where the cost per mile is lower. For the BRT Alternative, this segment also does well on the cost factors, although the High Point to Winston-Salem Corridor is the lowest cost. The shorter segment from Greensboro CBD to Winston-Salem CBD does not perform as well on a cost basis as the longer segment, for both alternatives. Ridership levels also drop, with this shorter segment carrying between 35 and 40 percent of the full corridor's ridership.

The High Point corridors serve fewer numbers of sensitive population groups and major destinations, primarily due to their shorter length. The High Point to Greensboro Corridor provides the greatest access, reflecting the more built up nature of the corridor. These corridors also avoid more potentially sensitive environmental locations. For the most part, the cost factors are worse for these corridors in comparison with the Burlington to

Clemmons Corridor, regardless of the alternative considered. The exception is the BRT Alternative on the High Point to Winston-Salem Corridor, which has the best cost performance of any corridor for either technology.

Not reflected in these indicators is the potential for the transit improvements to help shape future development patterns. Transit's potential effect on land use should be considered in any evaluation. Not only can transit help direct development in undeveloped areas, it can also help focus redevelopment activities in more built up areas of the Triad.

Recommendations

It is recommended that the applicable transit operators within and adjoining the Greensboro Urban Area carry out the following action steps:

- GTA – Implement the Mobility Greensboro service enhancement recommendations as discussed above, and as reflected on Map 7.2
- GTA – Focus on enhanced passenger amenities, partnership with colleges and universities, and marketing outreach strategies to achieve future ridership goals
- GTA – Pursue primary and supporting sources of additional revenue to facilitate Mobility Greensboro implementation
- PART – Complete the alternatives analysis process and move forward with preliminary engineering phase of the Regional Commuter Transit Project
- PART – Continue to engage regional partners in a dialog toward enhanced funding sources for regional transit services
- GTA and PART – Coordinate the planning and development of transit corridors and station locations with adjacent land use planning and development
- GTA and PART – Coordinate transit routes and station locations with pedestrian and bicycle facilities and access points
- GTA and PART – Encourage complementary service enhancements by other transit providers in the region
- GTA, PART, WSTA, HiTran – Continue coordination of transit services, and connections with other human service providers in the region
- GUAMPO – Support multi-state decision-making process to implement high-speed rail service linking Greensboro with New York, Atlanta, New Orleans and Jacksonville, Florida.